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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,625	04/09/2001	David C. Paul	8932-295	9112

20582 7590 03/29/2004

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51 Louisiana Avenue, N.W.
WASHINGTON, DC 20001-2113

EXAMINER

JACKSON, SUZETTE JAMIE

ART UNIT	PAPER NUMBER
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3738

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,625

Applicant(s)

PAUL ET AL.

Examiner

Jackson J Suzette

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 41-45, 47-52 and 59-67 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-10, 12-15, 21-23, 26, 27, 31-35, 40, 46, 53, 57 and 58 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 11, 16-20, 24, 25, 28-30, 36-39 and 54-56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Applicant's amendment dated 1/20/04 has been received in application serial number 09/828,625.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8, 15, 21-23, 26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. 6,51,509 in view of Khvisyuk SU 833226B. Ford et al. discloses the invention as claimed (noting figure 1B and 1C) comprising: An intervertebral implant made of a plug of allogenic bone (col. 1, lines 45-46, 58-63); conforming in size and shape with a portion of the end plates of adjacent vertebrae (col. 4, lines 10-13); a plurality of top and bottom teeth in at least a two (col. 5, lines 2-7) dimensional array spaced apart from one another;

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wherein the teeth have a pyramidal shape (col. 4, line 1 and 34-56) profile defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant; wherein the teeth are integral with the top and bottom surfaces (see figure 1C); and an opening communicating with a hollow cylindrical interior space however, Ford does not specify teeth meeting together to form a tip wherein the sides opposite each other form an *acute angle at the tip*. Khvisyuk teaches a spinal implant with pyramidal protrusions having an acute apex/tip. It would have been obvious to one having ordinary skill in the art at the time the invention was made to take the invention of Ford and make the teeth tips into acute angles as taught by Khvisyuk because these sharp angles would provide better traction between the opposing vertebrae to prevent expulsion of the implant.

5. Claims 2-3, 9-10, 12-14, 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. in view of Khvisyuk and further in view Pafford et al. 6,371,988. Ford et al. and Khvisyuk have been disclosed above however Ford et al. does not teach osteoconductive material to promote the formation of new bone by using bone chips and while Ford et al. shows teeth on the top and bottom which are interrupted to form a channel they do not specify the insertion of an instrument. Pafford et al. teaches an allograft implant with teeth (205); and a space (25, 130) for receiving osteogenic material and/or bone chips (see figure 40 and see col. 13, lines 37-44 and element 30) and instruments for distracting the vertebral endplates (see col. 8, lines 41-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to take the inventions of Ford et al. Khvisyuk and pack the chamber with osteoconductive material (mainly bone chips) because it would promote adherence of the implant

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to the surrounding vertebrae and it also would have been obvious to remove a portion of a disc located between the adjacent vertebrae, distract the endplates and then insert the implant because distracting is a well know technique for implanting metal and bone spacers.

6. Claims 5, 7, 27, 31-32, 46, 53 and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford et al. in view of Aebi et al. 6,482,233. Ford has been disclosed above, however Ford does not specify a wedge and/or incline shaped profile; or one rounded edge between top and bottom surfaces. Aebi et al. teaches this structure (noting figure 6) and four-sided pyramid shape teeth (see col. 2, lines 47-58). It would have been obvious to one having ordinary skill in the art at the time the invention was made to take the invention of Ford et al. and manufacture it in a wedge/inclined shape to facilitate easier delivery of the prosthetic implant.

Allowable Subject Matter

7. Claims 41-45, 47-52, 59-67 are allowed.

8. Claims 4, 6, 11, 16-20, 24-25, 28-30, 36-39 and 54-56 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *It is noted that claims 17-19 are allowable only because they depend from the novel subject matter of claim 16 and claim 29 is only allowable because it depends from the allowable subject matter of claim 28.*

Conclusion

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).


Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzette J. Jackson whose work schedule is Monday-Friday 9-6:30 off every other Friday and whose telephone number is 703-308-6516.

12. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.


Suzette J. Jackson
22 March 2004